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GOODWILL IN CONSOLIDATED BALANCE-SHEET PROBLEMS

EFFECT OF SALE OF SUBSIDIARY'S STOCK TO OUTSIDERS ON THE PARENT COMPANY'S INTEREST

A correspondent, in commenting upon the discussion of goodwill in consolidated statements appearing in the *Students' Department* in the December, 1934, issue of THE JOURNAL OF ACCOUNTANCY, asks "suppose a corporation owned 90 per cent. of the outstanding stock of a subsidiary and it had been its practice to add its share of profits of the subsidiary to the investment account, what would be the effect on these original holdings if the subsidiary sold treasury stock to outside interests?"

On page 465 of the December, 1934, issue of THE JOURNAL, I had made the statement that "The point to be remembered here is that the value of the goodwill per share attaching to any purchase is set once and for all at the time of the purchase." I am of the opinion that subsequent sales of stock of the subsidiary to others does not affect the goodwill acquired by the parent company.

To simplify the discussion, unissued stock is used in the examples, although the method of accounting would not have been changed had treasury stock been used.

Let us assume that the S (subsidiary) Company is incorporated for $100,000 (1,000 shares of a par value of $100 per share), and immediately sells 900 shares to the P (parent) Company for $90,000; the remaining 100 shares is unissued. At this point, P Company holds a 100 per cent. interest in the outstanding stock of S Company, as shown below:

Example 1

	S Company Capital stock outstanding
Balance	$90,000
Cost of P Company's interest	90,000
Goodwill	$ 0

If the 900 shares were acquired at a price in excess of par value (say $95,000) the situation would be:

Example 2

	S Company	
	Capital stock outstanding	Premium on stock
Balances	$90,000	$5,000
Cost of P Company's interest	90,000	5,000
Goodwill	$ 0	$ 0

It will be seen from the above that P Company, as 100 per cent. owner, paid nothing for goodwill when it acquired the stock from S Company at a premium.

If (under example 1) the remaining 100 shares of stock of S Company are sold later in the day, the changes may be shown as follows:

Example 3

	S Company Capital stock outstanding
Balance	$100,000
Minority interest (10%)	10,000
P Company's interest (90%)	$ 90,000
Cost of P Company's interest	90,000
Goodwill	$ 0

It will be noted that while there has been no change in the number of shares held by P Company, its interest has decreased from 100 per cent. to 90 per cent.

But let us alter example 3 by assuming that the 100 shares were sold for $11,000 and see what effect that has on the problem.

Example 4

	S Company	
	Capital stock outstanding	Premium on stock
Balances	$100,000	$1,000
Minority interest (10%)	10,000	100
P Company's interest (90%)	$ 90,000	$ 900
Cost of P Company's interest	90,000	
Credit to surplus of P Company		900
Goodwill	$ 0	$ 0

There can be no question but that there were two separate and distinct transactions in the stock of S Company, and that they must be so considered, even though they took place on the same day. At the time of the purchase of the 900 shares of the stock by P Company, it obtained an interest equal to the entire book value of S Company. Later in the day, when the remaining 100 shares were sold at a premium of $1,000, the P Company was entitled to its share of such premium, and could properly increase its investment account by $900 with a corresponding credit to its surplus account. The minority interests were entitled to their share (10 per cent.) of the premium which they paid upon becoming stockholders.

Now let us change the problem a bit by assuming that the P Company acquired 900 shares of S Company stock from the stockholders who had just incorporated S Company (rather than from the company itself) at a cost of $95,000.

Example 5

	S Company Capital stock outstanding
Balance	$90,000
Cost of P Company's interest	95,000
Goodwill	$ 5,000

As the excess of the payment over the par value of the stock was not received by the S Company, but by outside stockholders, such excess does not increase the net worth of the subsidiary, as in example 2, but represents a payment for goodwill.

Let us further assume that in the afternoon, the S Company sold the remainder of its unissued stock (100 shares) for $12,000. What is the effect of this sale?

Example 6

	S Company	
	Capital stock outstanding	Premium on stock
Balances	$100,000	$2,000
Minority interest (10%)	10,000	200
P Company's interest (90%)	$ 90,000	$1,800
Cost of P Company's interest	95,000	
Credit to P Company's surplus		1,800
Goodwill	$ 5,000	$ 0

Again it is apparent that P Company shares proportionately in the premium received on the subsequent sale of capital stock to minority interests. Its share of the premium ($1,800) could be taken up in its accounts by a charge to investment account and a credit to surplus. The elimination for goodwill computation would be:

Cost of 900 shares of stock	$ 95,000	
Proportionate share of premium	1,800	
Total in investment account		$96,800
Book value of S Company:		
Capital stock	$100,000	
Premium on stock	2,000	
Total book value	$102,000	
90% thereof		91,800
Goodwill		$ 5,000

Conversely, if the stock were sold to the minority interests at a discount of $2,000, P Company should credit its investment account with its proportionate interest ($1,800) and charge surplus. The goodwill would remain the same, as shown below:

Cost of 900 shares of stock	$ 95,000	
Less: proportionate share of stock discount	1,800	
Total in investment account		$93,200
Book value of S Company:		
Capital stock	$100,000	
Less: stock discount	2,000	
Total book value	$ 98,000	
90% thereof		88,200
Goodwill		$5,000

From the two preceding computations, it will be seen that the goodwill determined at the date of acquisition is not affected by subsequent sales to minority interests. It would be rather difficult to sustain the position that the share in the premium ($1,800) should be applied in reduction of the goodwill, since you must at the same time justify the assertion that stock discount would increase the amount of goodwill.

In the above examples, it was assumed that the stock of S Company was sold before the company began actual operations. Let us consider a case in which P Company purchases on January 1, 1934, 900 shares of the stock of S Company from stockholders for $95,000, the profits of S Company amount to $10,000 for the year ended December 31, 1934, and, on that date, the remaining 100 shares of unissued stock is sold by S Company for par ($10,000).

Example 7

	S Company	
	Capital stock outstanding	Surplus
Balances, December 31, 1934	$100,000	$10,000
Minority interest (10%)	10,000	1,000
P Company's interest (90%)	$ 90,000	$ 9,000
Cost of P Company's interest	95,000	
Credit to P Company's surplus		9,000
Goodwill	$ 5,000	$ 0

Obviously, the minority interest is entitled to 10 per cent. of the book value at December 31, 1934, or a total of $11,000, even though the amount received for the stock sold to them is but $10,000. And, further, if $1,000 of

the surplus earnings is to be shown as a credit to the minority interest, only $9,000 of such earnings may be taken up by the P Company. However, the P Company fully owned and controlled S Company during the entire period of its operations, and hence, should be permitted to take up the entire amount of the earnings of $10,000. This contention is emphasized if we assume that the unissued stock was not sold to the minority interests until the next day, January 1, 1935. At December 31, 1934, P Company would have a 100 per cent. interest in the outstanding capital stock of $90,000 and the surplus of $10,000.

Probably as good a method as any to record these facts on the books of P Company would be:

Investment in S Company		Goodwill	Surplus	
(1) $90,000	(3) $1,000	(1) $5,000	(3) $1,000	
(2) 10,000				(2) $10,000

Cash	
	(1) $95,000

(1) To record the payment of $95,000 in cash for the outstanding 900 shares of stock of S Company. In the above example, the investment has been distributed to show the underlying equity in the net assets of S Company in the "investment" account, and the goodwill element in the "goodwill" account. In practice, generally, these two accounts would be combined.

(2) To record the subsidiary profits for the year 1934.

(3) To give effect to the change in the underlying equity in the net assets of S Company arising through the sale of 100 shares of unissued stock of that company at par.

If we assume that the minority interest was purchased on January 1, 1935, and that the profits for the year 1935 amounted to $15,000 we would have at December 31, 1935, the following:

Example 8

	S Company	
	Capital stock outstanding	Surplus
Balances, January 1, 1934	$ 90,000	
Profits for 1934		$10,000
Sale of stock, January 1, 1935	10,000	
Profits for 1935		15,000
Balances, December 31, 1935	$100,000	$25,000
Minority interest (10%)	10,000	2,500
P Company's interest (90%)	$ 90,000	$22,500
Cost of P Company's interest	95,000	
Goodwill	$ 5,000	

The transactions of example 8 may be shown on the books of P Company as follows:

Investment in S Company		Goodwill		Surplus	
(1) $90,000	(3) $1,000	(1) $5,000	(3) $1,000		(2) $10,000
(2) 10,000					(4) 13,500
(4) 13,500					

Cash	
	(1) $95,000

(1) To record the payment of $95,000 in cash for the 900 shares of stock of S Company on January 1, 1934.

(2) To record the profits (100%) of S Company for the year 1934.

(3) To give effect to the change in the underlying equity in the net assets of S Company arising through the sale of 100 shares of unissued stock, at par, on January 1, 1935.

(4) To record the proportionate interest (90%) in the profits of S Company for the year 1935 (90% of $15,000).

Now let us change the problem appearing on page 468 of the December, 1934, issue of THE JOURNAL OF ACCOUNTANCY and assume the following:

Problem:

The S Company's balance-sheet at December 31, 1933, contained the following accounts:

Capital stock authorized (2,000 shares)	$200,000
Unissued stock (300 shares)	30,000
Treasury stock (50 shares) at cost	7,500
Surplus	20,000
Capital surplus (arising from appraiser's revaluation of fixed assets)	4,500
Premium on stock (issued at 110)	17,000
Reserve for sinking fund	35,320
Reserve for extension of plant	20,000

On December 31, 1933, the P Company purchases 90 per cent. of the outstanding stock of S Company at $170 per share. During the year 1934, the S Company had earnings of $15,000 and the P Company took up its proportion of such earnings (90 per cent. of $15,000 or $13,500) by a charge to its investment account in the stock of S Company and a credit to its surplus account. The surplus account of S Company showed a balance of $35,000 at December 31, 1934. On this latter date, the 50 shares of treasury stock of S Company were sold to outsiders for $7,500. Compute for consolidated balance-sheet purposes, the goodwill arising from the transactions, and give a transcript of the ledger accounts of P Company.

Solution:

Net worth of S Company December 31, 1933:			
Capital stock (authorized)		$200,000	
Less:			
Unissued stock	$30,000		
Treasury stock (par)	5,000	35,000	
Capital stock outstanding			$165,000

Surplus and surplus appropriations:		
Surplus	$ 20,000	
Capital surplus	4,500	
Premium on stock (original issue)	17,000	
Reserve for sinking fund	35,320	
Reserve for extension of plant	20,000	
Total	$ 96,820	
Less: premium on treasury stock	2,500	
Total surplus and surplus appropriations		$ 94,320
Total book value of 1,650 shares outstanding		$259,320

The computation of goodwill is a simple matter:

Net worth of S Company at December 31, 1933	$259,320
Minority interest (10%)	25,932
P Company's interest (90%)	$233,388
Cost of P Company's interest—1,485 shares (90% of 1,650) at $170 per share	252,450
Goodwill	$ 19,062

As we learned above, the amount of the goodwill was set at the time the stock in S Company was acquired. But what is the effect of selling the treasury stock of S Company, one year later, after the company had earned a profit of $15,000? This stock was sold at cost; hence, the book value of S Company, at December 31, 1934, would be:

Book value, December 31, 1933 (per above)	$259,320
Profits for the year 1934	15,000
Total	$274,320
Treasury stock sold:	
Par value of additional stock outstanding	5,000
Premium	2,500
Book value, December 31, 1934	$281,820

The 90 per cent. interest of P Company has been "diluted," because of the sale of the treasury stock, to 87.35 + per cent. The underlying equities in the net assets of S Company at December 31, 1934, are therefore:

P Company (1,485/1,700)	$246,178
Minority interest, including the treasury stock purchasers, (215/1,700)	35,642
Total	$281,820

The accounts of P Company would show:

Investment in S Company		Goodwill		Surplus	
(1) $233,388	(3) $710	(1) $19,062	(3) $710		(2) $13,500
(2) 13,500					

Cash	
	(1) $252,450

(1) To record the payment of $252,450 for 1,485 shares of stock of S Company at December 31, 1933, representing:

Underlying equity in net assets	$233,388
Goodwill	19,062
Cash	$252,450

(2) To record 90% of the profit of $15,000 earned during 1934.

(3) To adjust the investment account to agree with the change in the equity in the net assets of S Company at December 31, 1934.

The purchasers of the 50 shares of treasury stock acquired an equity in the S Company of (50/1,700 of $281,820), or ..... $ 8,289
for which they paid 7,500

and received an excess of equity over cost of ..... $ 789

This excess should be apportioned as follows:

P Company (1,485/1,650)	$ 710
Minority interest at December 31, 1933 (165/1,650)	79
Total	$ 789

American Institute Examination

This department has received two letters expressing disagreement with the solution to problem 1, part II, of the November, 1934, examination. The solution appeared in the *Students' Department* for March, 1935. The problem is given below:

On December 31, 1928, the Star Drug Company with an outstanding capital of $500,000, the Mormon Drug Company with an outstanding capital of $400,000 and the Gulf Drug Company with an outstanding capital of $450,000 —all shares of $100 each—merged into one operating company known as Continental, Inc., with a capital stock issue of 1,350,000 shares of no par value.

The stockholders of the three merging companies received the 1,350,000 shares in return for their aggregate holdings of $1,350,000 par, i. e., 100 shares of Continental, Inc., for each share of the merging companies. On the above date Continental, Inc., also took over all the assets and liabilities of the three companies. Their individual charters were, however, kept alive.

On December 31, 1933, five years later, the balance-sheet of Continental, Inc., was:

Assets		
Cash		$ 150,000
Accounts receivable:		
Star Drug Co. customers	$ 125,000	
Mormon Drug Co. customers	100,000	
Gulf Drug Co. customers	70,000	295,000
Inventory:		
Star Drug Co. products, materials, etc.	$ 140,000	
Mormon Drug Co. products, materials, etc.	120,000	
Gulf Drug Co. products, materials, etc.	115,000	375,000
Plant and equipment at present values appraised on December 31, 1933:		
Star Drug Co. plant	$1,500,000	
Mormon Drug Co. plant	1,300,000	
Gulf Drug Co. plant	1,000,000	3,800,000
		$4,620,000
Liabilities		
Accounts payable		$ 89,000
Bonds of subsidiary companies:		
Star Drug Company	$1,197,400	
Mormon Drug Company	783,160	
Gulf Drug Company	519,440	2,500,000
Capital stock outstanding		785,000
Surplus		1,246,000
		$4,620,000

At December 31, 1933, Continental, Inc.'s, stockholders decided to decentralize and restore to each of the original companies its proportion of assets and liabilities. The net worth was to be prorated on the basis of each company's capital investment on December 31, 1928, and it was found that the Star Drug Company was to receive 40%, the Mormon Drug Company 36% and the Gulf Drug Company 24%.

On December 31, 1928, the three merging companies owned each other's stock as follows:

The Star Drug Company owned:	
1,200 shares Mormon Drug Co., cost	$ 100,000
2,500 shares Gulf Drug Co., cost	200,000
The Mormon Drug Company owned:	
1,000 shares Gulf Drug Co., cost	75,000
500 shares Star Drug Co., cost	50,000
The Gulf Drug Company owned:	
50 shares Mormon Drug Co., cost	10,000
400 shares Star Drug Co., cost	30,000

A summary of Continental, Inc.'s surplus shows:

Surplus of merging companies—December 31, 1928:	
Star Drug Company	190,000
Mormon Drug Company	375,000
Gulf Drug Company	81,000
Excess of par over book value of intercompany holdings	100,000
Earnings of five years	892,500
	$1,638,500
Less: dividends paid	392,500
Balance, December 31, 1933	$1,246,000

It was decided that in the redistribution each of the three companies would receive a proportionate share of the cash; its own accounts receivable and inventory; its original investments in the other companies at original cost to itself and its own plant and equipment. On the other hand, each would assume a proportionate share of the current liabilities but would become wholly liable for its own outstanding bonds. All differences were to be charged or credited to current account for future settlement.

From the foregoing data prepare:

1. A statement showing in columnar form the balance-sheets of the three drug companies after decentralization on December 31, 1933.
2. A statement showing that the adopted ratio 40: 36: 24 approximately agrees with the proportions existing on December 31, 1928.

The point of disagreement may be stated as follows: In connection with the distribution of the assets and liabilities of Continental, Inc. in the ratio of 40, 36, and 24, should the intercompany stockholdings be valued:

(1) At the original cost to the three predecessor companies, or
(2) At an adjusted value based upon the value of the net assets underlying the stocks.

In the published solution, the stocks were valued on the first basis; my correspondents believe that the second basis should have been used.

The problem states: "It was decided that in the redistribution each of the three companies would receive ....., its original investments in the other companies at original cost to itself ....." This seems to be a clear and definite statement. However, the result is inequitable because the three old companies are not left in their original relative positions with respect to each other.

It seems, therefore, that anyone solving this problem is confronted by the following dilemma: If he uses the first basis of valuation of the stocks, he complies with the requirements of the problem but an equitable redistribution is not effected; if he applies the second basis of valuation, he produces an equitable redistribution but does not comply with the requirements of the problem.

Faced with such a dilemma, a candidate should probably be governed by the express wording of the problem, and the published solution was prepared on that basis. For the benefit of any who may be interested, a solution on the other basis is submitted below:

(1) Several methods may be used in ascertaining the book values of the intercompany stockholdings at December 31, 1933. The following is quite simple:

The intercompany holdings may be listed as follows:

	Star		Mormon		Gulf	
	Shares	Fraction	Shares	Fraction	Shares	Fraction
Star Drug Company..			1,200	3/10	2,500	5/9
Mormon Drug Company.....	500	1/10			1,000	2/9
Gulf Drug Company..	400	2/25	50	1/80		
"Outside" stockholders	4,100	41/50	2,750	11/16	1,000	2/9
Totals.....	5,000	50/50	4,000	80/80	4,500	9/9

The adjusted net worth of the three companies, after considering the intercompany stockholdings at book value, may be ascertained as follows:

Let x = the adjusted net worth of the three companies.

41/50(.40x), or .328x = the net assets of the Star Drug Company in the hands of outsiders.

11/16(.36x), or .2475x = the net assets of the Mormon Drug Company in the hands of outsiders.

2/9 (.24x), or .0533⅓x = the net assets of the Gulf Drug Company in the hands of outsiders.

Then .6288⅓x = $2,031,000, the net worth of Continental, Inc.

or, x = $3,229,791, the total adjusted net worth of the three companies.

This total adjusted net worth is distributed below:

	Adopted ratio	Amount
Star Drug Company	40%	$1,291,916
Mormon Drug Company	36	1,162,725
Gulf Drug Company	24	775,150
Totals	100%	$3,229,791

As these adjusted net worth figures include the intercompany stockholdings at book value, and, further, as these stockholdings are to be distributed on a basis of original cost, it will be necessary to make a further adjustment before the balance-sheets after decentralization at December 31, 1933, may be set up.

	Star Drug Company	Mormon Drug Company	Gulf Drug Company
Adjusted net worth (per above)	$1,291,916	$1,162,725	$775,150
Deduct book values of intercompany stockholdings:			
Star Drug Company:			
1/10 of $1,291,916		$ 129,192	
2/25 of $1,291,916			$103,353
Mormon Drug Company:			
3/10 of $1,162,725	$ 348,817		
1/80 of $1,162,725			14,534
Gulf Drug Company:			
5/9 of $775,150	430,639		
2/9 of $775,150		172,256	
Total deductions	$ 779,456	$ 301,448	$117,887
Total net worth before intercompany stockholdings	$ 512,460	$ 861,277	$657,263

Add:			
Intercompany stockholdings, at original cost:			
Star Drug Company		$ 50,000	$ 30,000
Mormon Drug Company	$ 100,000		10,000
Gulf Drug Company	200,000	75,000	
Total intercompany stockholdings, at cost	$ 300,000	$ 125,000	$ 40,000
Total net worth including intercompany stockholdings, at cost	$ 812,460	$ 986,277	$697,263
Divided as follows:			
Capital stock	$ 500,000	$ 400,000	$450,000
Surplus	312,460	586,277	247,263
Total	$ 812,460	$ 986,277	$697,263

The following is the statement showing in columnar form the balance-sheets of the three drug companies after decentralization on December 31, 1933. The differences after the redistribution as required by the problem are charged or credited to current account for future settlement:

Assets	Star Drug Company	Mormon Drug Company	Gulf Drug Company
Current assets:			
Cash	$ 60,000	$ 54,000	$ 36,000
Accounts receivable	125,000	100,000	70,000
Inventories	140,000	120,000	115,000
Total current assets	$ 325,000	$ 274,000	$ 221,000
Due from Star Drug Company	$	$ 22,937	$
Due from Gulf Drug Company	$	$ 79,540	$
Plant and equipment	$1,500,000	$1,300,000	$1,000,000
Investments (at cost):			
Star Drug Company	$	$ 50,000	$ 30,000
Mormon Drug Company	100,000		10,000
Gulf Drug Company	200,000	75,000	
Total investments	$ 300,000	$ 125,000	$ 40,000
Total assets	$ 2,125,000	$1,801,477	$1,261,000

Liabilities and net worth			
Accounts payable	$ 35,600	$ 32,040	$ 21,360
Due to Mormon Drug Company	79,540		22,937
Bonds outstanding	1,197,400	783,160	519,440
Total liabilities	$1,312,540	$ 815,200	$ 563,737
Net worth:			
Capital stock	$ 500,000	$ 400,000	$ 450,000
Surplus	312,460	586,277	247,263
Total net worth	$ 812,460	$ 986,277	$ 697,263
Total liabilities and net worth	$2,125,000	$1,801,477	$1,261,000

The solution under requirement (2) is not affected and will be the same as that appearing on pages 232 to 234 of the March, 1935, issue of THE JOURNAL OF ACCOUNTANCY.